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Control/Tracking Number : 11-S-69-AAS-218

Activity :Speaker

Current Date/Time : 2/17/2011 6:17:41 AM

Title:

Complete Hard X-ray Surveys, AGN Luminosity Functions and the X-ray Background

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Abstract:

AGN are believed to make up most of the Cosmic X-Ray Background (CXB) above a few keV, but this background cannot be fully resolved at energies <10 keV due to absorption. The Swift/BAT and INTEGRAL missions are performing the first complete hard x-ray surveys with minimal bias due to absorption. The most recent results for both missions will be presented. Although the fraction of the CXB resolved by these surveys is small, it is possible to derive unbiased number counts and luminosity functions for AGN in the local universe. The survey energy range from 15-150 keV contains the important reflection and cutoff spectral features dominate the shape of the AGN contribution to the CXB. Average spectral characteristics of survey detected AGN will be presented and compared with model distributions. The numbers of hard x-ray blazars detected in these surveys are finally sufficient to estimate this important component's contribution the cosmic background. Constraints on CXB models and their significance will be discussed.

Category:

Facility Keywords:

{\it Facilities:} \facility{Swift ()} ; {\it Facilities:} \facility{Swift ()}, \facility{I

Preplanned Sessions (Complete):

: X-Ray Surveys of AGN (Winter, Accepting Orals and Posters)